# A Note on the Occurrence of a Symbiotic Oligochaete, *Chaetogaster limnaei*, in the Mantle Cavity of the Asiatic Clam, *Corbicula manilensis*

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During a survey of the benthic invertebrates in the Delta-Mendota Canal, California, a small naiidid oligochaete, *Chaetogaster limnaei* von Baer, 1827 was discovered inhabiting the mantle cavity of the Asiatic clam, *Corbicula manilensis* (Philippi, 1844). Similarly infested Asiatic clams have subsequently been collected from 2 other California locations, Lake Berryessa and the Mokelumne River. This small worm has been widely reported as a symbiont living in the mantle cavity of freshwater pulmonate snails (Pennak, 1953; Brinkhurst, 1964), freshwater mussels (Coker *et al.*, 1921) and sphaeriid clams (Gayle, 1973); however, it has not previously been reported in *Corbicula manilensis*.

Clams were sampled monthly at mile 77.66 of the Delta-Mendota Canal from 22 January 1974 until 16 October 1974. Collecting was terminated in November when the canal was dewatered for cleaning and maintenance. Ten clams, ranging from 12.3 to 33.8mm in length, were selected at random from samples collected each month and examined for the presence of *Chaetogaster limnaei*.

Infestation was noticeably seasonal. Nearly 87% of the clams examined from March through May were infested and the mean monthly infestations (number of worms per clam) during this period ranged from 1.6 to 5.0. Less than 3.0% of the clams examined during the other months were infested and the mean monthly infestation did not exceed 0.2 worms per clam. Student-Newman-Keuls multiple range analysis (Woolf, 1968) showed that the intensity of infestation was significantly greater (0.05 level) during March, April and May than in the other months ($N = 100$; $s = 2.52$; $w > 1.15$).

The relationship between *Corbicula manilensis* and *Chaetogaster limnaei* is uncertain. All clams examined appeared healthy with no overt evidence of tissue damage. The oligochaetes were usually found on the gills where they appeared to be feeding in the lateral grooves. Mucus and organic debris were present in the gut. Gruffydd (1965) and Shigina (1970) have reported the food of *Chaetogaster limnaei* collected from snails to include snail "kidney" cells, algae, protozoa, rotifers and cercariae. They have also been reported to consume "juvenile mussels" (Coker *et al.*, 1921).

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# U. M. E.

The Sixth European Malacological Congress of the *Unitas Malacologica Europaea* will be held in the week of 15 to 20 August 1977 at the Free University in Amsterdam, Holland. This congress, under the auspices of a Comité d'Honneur consisting of Dr. Vera Fretter (U. K.), Dr. A. Riedel (Poland), Dr. K. M. Wilbur (U. S. A.), Dr. J. Lever and Dr. C. P. Raven (both from the Netherlands), is intended to be a meeting place of everybody engaged in or interested in any branch of malacology. Apart from the usual items on the program, such as a meeting of the European Invertebrate Survey, field trips, and the General Assembly of the U. M. E., there will be twelve main lectures by specialists in the various fields.